

Claims

- [c1] 1. A method for controlling the starting of an internal combustion engine an exhaust aftertreatment device with a minimal threshold temperature for proper operation, wherein the method is performed within a predetermined time period after engine start, the method comprising:
increasing an electrical load on an electrical generator that is driven by the engine; and
throttling an air intake of the engine to reduce an intake manifold pressure to a target pressure.
- [c2] 2. The method of claim 1 wherein the electrical load of said generator comprises at least one glow plug disposed in the engine.
- [c3] 3. The method of claim 1 wherein the electrical load of said generator comprises an electrical heater.
- [c4] 4. The method of claim 1 wherein the engine has an exhaust gas recirculation system in which exhaust gases are conducted from an engine exhaust to an engine inlet via an exhaust gas recirculation valve, further comprising reducing a quantity of exhaust gases recirculated in response to said throttling.
- [c5] 5. The method of claim 1 wherein the engine has a variable geometry turbine coupled to an air inlet of the engine, further comprising operating said turbine with open-loop control in response to said throttling.
- [c6] 6. The method of claim 1 wherein said throttling is discontinued when a gas temperature downstream of the aftertreatment device is below a threshold temperature.
- [c7] 7. The method of claim 1, further comprising: discontinuing said increasing and said throttling when an exhaust gas temperature downstream of the aftertreatment device is greater than said threshold temperature for proper operation of the aftertreatment device.
- [c8] 8. The method of claim 1 wherein said increasing the electrical load and said throttling are carried out only when a temperature of the engine is within a

predetermined temperature interval.

- [c9] 9. A system for controlling an internal combustion engine, the engine having an exhaust gas aftertreatment system, an electrical generator coupled to the engine, and a throttle valve disposed in an inlet of the engine, the system comprising:
an engine controller, the controller increasing an electrical load on the electrical generator, the controller further closing, partially, the throttle valve.
- [c10] 10. The system of claim 9 wherein said throttle closing causes a pressure in the engine intake to reduce to a target pressure.
- [c11] 11. The system of claim 9 wherein the engine is a diesel engine.
- [c12] 12. The system of claim 9 wherein the aftertreatment device is an oxidation catalyst.
- [c13] 13. The system of claim 9, further comprising an exhaust gas recirculation system in which exhaust gases are conducted from an engine exhaust to an engine inlet via an exhaust gas recirculation valve coupled to said controller, wherein said controller causes an amount of flow through said exhaust gas recirculation valve to reduce in response to said throttle closing.
- [c14] 14. The system of claim 9 wherein said controller causes said throttle closing is accomplished when an exhaust gas temperature downstream of the exhaust aftertreatment device is below a threshold temperature.
- [c15] 15. The system of claim 8, further comprising glow plugs disposed in engine cylinders wherein said electrical load is placed on said electrical generator by said glow plugs.
- [c16] 16. The system of claim 8, further comprising an electrical heater disposed in a vehicle in which the engine is also disposed where said electrical load is placed on said electrical generator by said glow plugs.
- [c17] 17. A method for controlling an internal combustion engine driving an electrical generator, the engine having an exhaust aftertreatment device disposed in an

engine exhaust, the engine also having a throttle valve disposed in an engine inlet, the method comprising:

increasing an electrical load placed on the electrical generator; and
closing, partially, the throttle valve.

- [c18] 18. The method of claim 17 wherein said throttle closing is accomplished to provide a target pressure in the engine inlet.
- [c19] 19. The method of claim 17 wherein said increasing and said closing are performed with a predetermined time period after the engine is started.
- [c20] 20. The method of claim 17 wherein said engine aftertreatment device is an oxidation catalyst having a minimum threshold temperature for proper operation.